Agriculture Canada
Policy Branch

Direction générale des politiques

# Canadian Fertilizer Consumption, Shipments and Trade

## 1990/1991

Canada

# Canadian Fertilizer Consumption, Shipments and Trade 1990/91

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This report is distributed as a working paper for those interested in Canadian agriculture. The findings and views do not necessarily represent the position of Agriculture Canada.

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# INTRODUCTION

With increased interest in environmental matters and improved farm management, there is a continuing need for more information on the distribution and consumption of fertilizer in Canada. This paper, the seventh issue in this series, presents the most current statistics available, describing the sources and identifying possible discrepancies. As well as presenting data on the quantities of fertilizers sold in Canada, this publication presents fertilizer farm expenditure data and the fertilizer price index.

Agriculture Canada does not conduct any surveys with respect to fertilizer sales of its own and therefore cannot assume responsibility for the actual figures themselves. Those contributing to this paper, however, do represent the most reliable sources currently available. Any questions concerning individual tables should be addressed to the organization or government agency responsible. (The relevant addresses and phone numbers are listed in the appendix).

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# 1. CONSUMPTION OF FERTILIZER BY FERTILIZER TYPE

The most reliable sources on fertilizer consumption are regional fertilizer associations. These associations conduct surveys of all the principal companies engaged in fertilizer retailing within a particular province. For western Canada, statistics are also obtained on shipments from the basic manufacturers to estimate the volume handled by those not affiliated with the retail companies surveyed. It is estimated that over 95 percent of all fertilizer sales are captured by these regional association surveys.

The fertilizer consumption figures represent the volume sold by retailers within a particular province. This may not correspond exactly to all on-farm consumption in that province, as there is some inter-provincial and international movement of fertilizer between retailer and farm. It may be assumed, however, that any net movement is not significant in relation to the overall provincial total.

The fertilizer consumption statistics for all provinces are listed according to the materials used in the preparation of the fertilizer. There are no data which indicate what proportion of this material was utilized in the granular form and what proportion was utilized in the preparation of liquid fertilizers.

In western Canada, the Western Canada Fertilizer Association (WCFA) figures for potash consumption were significantly less than those reported to have been shipped from potash mines. It is assumed that this discrepancy is due to a number of individual fertilizer dealers ordering their potash directly from the mines, rather than through their particular company (only the retail companies submit statistics to WCFA).

For the purposes of the consumption tables, potash use will be assumed to be mine shipments reported by the Potash and Phosphate Institute rather than that given by WCFA. The figure for "muriate of potash" is derived by subtracting the potash contained in "other mixtures" from the total potash shipped.

## Table 1.1 Fertilizer Materials Sold, Atlantic Provinces, Year Ended June 30, 1991

| Fertilizer Material | Quantity | Nutrient Content | | |
|---|---|---|---|---|
| | | Nitrogen (N) | Phosphate (P2O5) | Potash (K2O) |
| | | (tonnes) | | |
| **Nitrogen:** | | | | |
| Urea | 10,698 | 4,921 | | |
| Ammonium Sulphate | 3,613 | 759 | | |
| Ammonium Nitrate | 27,788 | 9,448 | | |
| **Phosphate:** | | | | |
| Diammonium Phosphate | 45,260 | 8,147 | 20,820 | |
| Single Superphosphate | 87 | | 17 | |
| Triple Superphosphate | 1,098 | | 505 | |
| **Potash:** | | | | |
| Muriate of Potash | 38,562 | | | 23,137 |
| Potassium Sulphate | 123 | | | 63 |
| Potassium Magnesium Sulphate | 3,666 | | | 807 |
| Potassium Nitrate | 103 | 13 | | 41 |
| Filler | 14,939 | | | |
| Borate | 228 | | | |
| Other | 1,925 | 48 | | |
| **TOTAL** | **148,090** | **23,336** | **21,342** | **24,048** |

Source: The Atlantic Fertilizer Institute

## Table 1.2 Fertilizer Materials Sold, Quebec Year Ended June 30, 1991

| Fertilizer Material | Quantity | Nutrient Content | | |
|---|---|---|---|---|
| | | Nitrogen (N) | Phosphate (P2O5) | Potash (K2O) |
| | | (tonnes) | | |
| **Nitrogen:** | | | | |
| Urea | 105,749 | 48,645 | | |
| Ammonium Sulphate | 4,029 | 846 | | |
| Ammonium Nitrate | 26,922 | 9,153 | | |
| Anhydrous Ammonia | 2,917 | 2,392 | | |
| Nitrogen Solutions | 13,054 | 4,699 | | |
| Other Nitrogen | 274 | 60 | | |
| Calcium Ammonium Nitrate | 13,991 | 3,743 | | |
| **Phosphate:** | | | | |
| Monoammonium Phosphate | 13,275 | 1,460 | 6,903 | |
| Diammonium Phosphate | 115,343 | 20,762 | 53,058 | |
| Single Superphosphate | 2,065 | | 413 | |
| Triple Superphosphate | 11,637 | | 5,353 | |
| Other Phosphate | 8 | | | |
| **Potash:** | | | | |
| Muriate of Potash | 132,584 | | | 80,876 |
| Potassium Sulphate | 1,688 | | | 844 |
| Potassium Magnesium Sulphate | 26,295 | | | 5,785 |
| Other fertilizer materials | 12,709 | | | |
| **TOTAL** | **482,540** | **91,760** | **65,727** | **87,505** |

Source: Quebec Fertilizer Manufacturers' Association

## Table 1.3 Fertilizer Materials Sold, Ontario Year Ended June 30, 1991

| Fertilizer Material | Quantity | Nutrient Content | | |
|---|---|---|---|---|
| | | Nitrogen (N) | Phosphate (P2O5) | Potash (K2O) |
| | | (tonnes) | | |
| **Nitrogen:** | | | | |
| Urea | 144,539 | 66,483 | | |
| Ammonium Sulphate | 3,321 | 697 | | |
| Ammonium Nitrate | 47,612 | 16,187 | | |
| Anhydrous Ammonia | 40,833 | 33,483 | | |
| Nitrogen Solutions | 116,089 | 32,276 | | |
| **Phosphate:** | | | | |
| Monoammonium Phosphate | 85,383 | 9,381 | 44,378 | |
| Diammonium Phosphate | 89,339 | 16,113 | 41,097 | |
| Single Superphosphate | 5,210 | | 1,242 | |
| Triple Superphosphate | 32,510 | | 14,593 | |
| 10-34-0 | 2,393 | 240 | 814 | |
| **Potash:** | | | | |
| Muriate of Potash | 230,844 | | | 143,736 |
| Potassium Sulphate | 9,310 | | | 4,670 |
| Potassium Magnesium Sulphate | 13,400 | | | 2,825 |
| **TOTAL** | **821,783** | **174,860** | **102,124** | **151,231** |

Source: The Fertilizer Institute of Ontario

## Table 1.4 Fertilizer Materials Sold, Eastern Canada Year Ended June 30, 1991

| Fertilizer Material | Quantity | Nutrient Content | | |
|---|---|---|---|---|
| | | Nitrogen (N) | Phosphate (P2O5) | Potash (K2O) |
| | | (tonnes) | | |
| **Nitrogen:** | | | | |
| Urea | 260,986 | 120,049 | | |
| Ammonium Sulphate | 10,963 | 2,302 | | |
| Ammonium Nitrate | 102,322 | 34,788 | | |
| Anhydrous Ammonia | 43,750 | 35,875 | | |
| Nitrogen Solutions | 129,143 | 36,975 | | |
| Other Nitrogen | 274 | 60 | | |
| Calcium Ammonium Nitrate | 13,991 | 3,743 | | |
| **Phosphate:** | | | | |
| Monoammonium Phosphate | 98,658 | 10,841 | 51,281 | |
| Diammonium Phosphate | 249,942 | 45,022 | 114,974 | |
| Single Superphosphate | 8,362 | | 1,672 | |
| Triple Superphosphate | 45,245 | | 20,451 | |
| 10-34-0 | 2,393 | 240 | 814 | |
| Other Phosphate | 8 | | | |
| **Potash:** | | | | |
| Muriate of Potash | 401,990 | | | 247,749 |
| Potassium Sulphate | 11,121 | | | 5,577 |
| Potassium Magnesium Sulphate | 43,361 | | | 9,416 |
| Potassium Nitrate | 103 | 13 | | 41 |
| Other Fertilizer Materials | 29,801 | 48 | | |
| **TOTAL** | **1,452,413** | **289,956** | **189,193** | **262,784** |

Source: This table is a summation of Tables 1.1, 1.2 and 1.3

## Table 1.5 Fertilizer Materials Sold, Manitoba Year Ended June 30, 1991

| Fertilizer Material | Quantity | Nutrient Content | | |
|---|---|---|---|---|
| | | Nitrogen (N) | Phosphate ($P_2O_5$) | Potash ($K_2O$) |
| | | (tonnes) | | |
| **Nitrogen:** | | | | |
| Urea | 163,231 | 75,086 | | |
| Ammonium Sulphate | 25,572 | 5,370 | | |
| Ammonium Nitrate | 54,634 | 18,576 | | |
| Anhydrous Ammonia | 149,334 | 122,454 | | |
| Nitrogen Solutions | 46,976 | 13,153 | | |
| **Phosphate:** | | | | |
| Monoammonium Phosphate | 184,215 | 20,264 | 95,792 | |
| **Potash: (1)** | | | | |
| Muriate of Potash | 39,479 | | | 24,082 |
| Other Fertilizer Materials (2) | 40,827 | 4,987 | 7,822 | |
| **TOTAL** | **704,268** | **259,890** | **103,614** | **24,082** |

Source: Western Canada Fertilizer Association

NOTE: See explanatory notes at the end of this section.

## Table 1.6 Fertilizer Materials Sold, Saskatchewan Year Ended June 30, 1991

| Fertilizer Material | Quantity | Nutrient Content | | |
|---|---|---|---|---|
| | | Nitrogen (N) | Phosphate ($P_2O_5$) | Potash ($K_2O$) |
| | | (tonnes) | | |
| **Nitrogen:** | | | | |
| Urea | 232,696 | 107,040 | | |
| Ammonium Sulphate | 47,400 | 9,954 | | |
| Ammonium Nitrate | 22,048 | 7,496 | | |
| Anhydrous Ammonia | 89,384 | 73,295 | | |
| Nitrogen Solutions | 10,559 | 2,957 | | |
| **Phosphate:** | | | | |
| Monoammonium Phosphate | 233,222 | 25,654 | 121,275 | |
| **Potash: (1)** | | | | |
| Muriate of Potash | 15,635 | | | 9,537 |
| Other Fertilizer Materials (2) | 75,702 | 20,950 | 12,425 | |
| **TOTAL** | **726,646** | **247,346** | **133,700** | **9,537** |

Source: Western Canada Fertilizer Association

NOTE: See explanatory notes at the end of this section.

## Table 1.7 Fertilizer Materials Sold, Alberta Year Ended June 30, 1991

| Fertilizer Material | Quantity | Nutrient Content | | |
|---|---|---|---|---|
| | | Nitrogen (N) | Phosphate ($P_2O_5$) | Potash ($K_2O$) |
| | | (tonnes) | | |
| **Nitrogen:** | | | | |
| Urea | 267,817 | 123,196 | | |
| Ammonium Sulphate | 58,402 | 12,264 | | |
| Ammonium Nitrate | 53,643 | 18,239 | | |
| Anhydrous Ammonia | 162,631 | 133,357 | | |
| Nitrogen Solutions | 41,444 | 11,604 | | |
| **Phosphate:** | | | | |
| Monoammonium Phosphate | 257,749 | 29,641 | 132,741 | |
| **Potash: (1)** | | | | |
| Muriate of Potash | 57,388 | | | 35,007 |
| Other Fertilizer Materials (2) | 50,403 | 8,792 | 7,439 | |
| **TOTAL** | **949,477** | **337,094** | **140,180** | **35,007** |

Source: Western Canada Fertilizer Association

NOTE: See explanatory notes at the end of this section.

## Table 1.8 Fertilizer Materials Sold, Prairies Year Ended June 30, 1991

| Fertilizer Material | Quantity | Nutrient Content | | |
|---|---|---|---|---|
| | | Nitrogen (N) | Phosphate ($P_2O_5$) | Potash ($K_2O$) |
| | | (tonnes) | | |
| **Nitrogen:** | | | | |
| Urea | 663,744 | 305,322 | | |
| Ammonium Sulphate | 131,374 | 27,589 | | |
| Ammonium Nitrate | 130,325 | 44,311 | | |
| Anhydrous Ammonia | 401,349 | 329,106 | | |
| Nitrogen Solutions | 98,979 | 27,714 | | |
| **Phosphate:** | | | | |
| Monoammonium Phosphate | 675,186 | 75,559 | 349,808 | |
| **Potash:** | | | | |
| Muriate of Potash | 112,502 | | | 68,626 |
| Other Fertilizer Materials | 166,932 | 34,729 | 27,686 | |
| **TOTAL** | **2,380,391** | **844,330** | **377,494** | **68,626** |

Source: This table is a summation of tables 1.5, 1.6 and 1.7.

## Table 1.9 Fertilizer Materials Sold, British Columbia Year Ended June 30, 1991

| Fertilizer Material | Quantity | Nutrient Content | | |
|---|---|---|---|---|
| | | Nitrogen (N) | Phosphate (P2O5) | Potash (K2O) |
| | | (tonnes) | | |
| **Nitrogen:** | | | | |
| Urea | 28,426 | 13,076 | | |
| Ammonium Sulphate | 8,123 | 1,706 | | |
| Ammonium Nitrate | 9,407 | 3,198 | | |
| Anhydrous Ammonia | 2,000 | 1,640 | | |
| **Phosphate:** | | | | |
| Monoammonium Phosphate | 19,737 | 2,171 | 10,066 | |
| **Potash: (1)** | | | | |
| Muriate of Potash | 10,624 | | | 6,481 |
| Other Fertilizer Materials (2) | 10,493 | 1,686 | 1,446 | |
| **TOTAL** | **88,810** | **23,477** | **11,512** | **6,481** |

Source: Western Canada Fertilizer Association

NOTE: See explanatory notes at the end of this section.

## Table 1.10 Fertilizer Materials Sold, Western Canada Year Ended June 30, 1991

| Fertilizer Material | Quantity | Nutrient Content | | |
|---|---|---|---|---|
| | | Nitrogen (N) | Phosphate (P2O5) | Potash (K2O) |
| | | (tonnes) | | |
| **Nitrogen:** | | | | |
| Urea | 692,170 | 318,398 | | |
| Ammonium Sulphate | 139,497 | 29,294 | | |
| Ammonium Nitrate | 139,732 | 47,509 | | |
| Anhydrous Ammonia | 403,349 | 330,746 | | |
| Nitrogen Solutions | 98,979 | 27,714 | | |
| **Phosphate:** | | | | |
| Monoammonium Phosphate | 694,923 | 77,730 | 359,874 | |
| **Potash:** | | | | |
| Muriate of Potash | 123,126 | | | 75,107 |
| Other Fertilizer Materials | 177,425 | 36,415 | 29,132 | |
| **TOTAL** | **2,469,201** | **867,807** | **389,006** | **75,107** |

Source: This is a summation of tables 1.5, 1.6, 1.7 and 1.9.

**Table 1.11** **Fertilizer Materials Sold, Canada**
**Year Ended June 30, 1991**

| Fertilizer Material | Quantity | Nutrient Content | | |
|---|---|---|---|---|
| | | Nitrogen (N) | Phosphate ($P_2O_5$) | Potash ($K_2O$) |
| | | (tonnes) | | |
| **Nitrogen:** | | | | |
| Urea | 953,156 | 438,447 | | |
| Ammonium Sulphate | 150,460 | 31,596 | | |
| Ammonium Nitrate | 242,054 | 82,297 | | |
| Anhydrous Ammonia | 447,099 | 366,621 | | |
| Nitrogen Solutions | 228,122 | 64,690 | | |
| Other Nitrogen | 274 | 60 | | |
| Calcium Ammonium Nitrate | 13,991 | 3,743 | | |
| **Phosphate:** | | | | |
| Monoammonium Phosphate | 793,581 | 88,572 | 411,155 | |
| Diammonium Phosphate | 249,942 | 45,022 | 114,974 | |
| Single Superphosphate | 8,362 | | 1,672 | |
| Triple Superphosphate | 45,245 | | 20,451 | |
| Other Phosphate | 8 | | | |
| 10-34-0 | 2,393 | 240 | 814 | |
| **Potash:** | | | | |
| Muriate of Potash | 525,116 | | | 322,856 |
| Potassium Sulphate | 11,121 | | | 5,577 |
| Potassium Magnesium Sulphate | 43,361 | | | 9,416 |
| Potassium Nitrate | 103 | 13 | | 41 |
| Other Fertilizer Materials | 207,226 | 36,463 | 29,132 | |
| **TOTAL - ALL CANADA** | **3,921,614** | **1,157,763** | **578,199** | **337,891** |

Source: This table is a summation of Tables 1.4 and 1.10

## NOTES FOR TABLES 1.5, 1.6, 1.7 AND 1.8

(1) Potash figures are derived from shipments reported by the Potash and Phosphate Institute

(2) "Other Fertilizer Materials" includes phosphate and sulphur solutions, mixed fertilizer materials and element sulphur and sulphate fertilizers not elsewhere shown. It is not possible to directly determine the nitrogen and phosphate content of "Other Fertilizer Materials". The nutrient content is calculated as a residual by subtracting the known nitrogen and phosphate sales from the provincial totals.

## 2. HISTORICAL CONSUMPTION DATA BY NUTRIENT EQUIVALENT

Up to the 1976/77 fertilizer year, data on provincial fertilizer consumption were provided by a Statistics Canada survey of fertilizer retailers and published in "Fertilizer Trade", Catalogue No. 46-207. These Statistics Canada data are useful in estimating the total nutrient consumption in each province.

After the 1976/77 fertilizer year, the industry associations have been the most reliable sources of information on fertilizer consumption[1]. Generally, their statistics have been expressed in terms of the different materials used and also provide a summary of total nutrient consumption for the province or region.

Atlantic provinces totals are presented in Table 2.1. A breakdown into provincial totals was available from 1966 to 1986 and was published in the first six issues of this series.

[1] Statistics Canada did conduct a retail survey for the 1983/84 fertilizer year and published the results in "Usage of Fertilizer Materials" (Stat. Can. Catalogue No. 46-504).

**TABLE 2.1 FERTILIZER SOLD AND NUTRIENT CONTENT, ATLANTIC PROVINCES**

| Year Ending June 30 | Total Fertilizer Sold | Nutrient Content | | | |
|---|---|---|---|---|---|
| | | Nitrogen (N) | Phosphate ($P_2O_5$) | Potash ($K_2O$) | All Nutrients (N + P + K) |
| | | (tonnes) | | | |
| 1991 | 148,090 | 23,336 | 21,342 | 24,048 | 68,726 |
| 1990 | 145,408 | 22,356 | 21,303 | 23,637 | 67,296 |
| 1989 | 143,471 | 22,203 | 20,275 | 22,270 | 64,748 |
| 1988 | 147,841 | 22,546 | 20,832 | 23,723 | 67,101 |
| 1987 | 154,635 | 23,910 | 21,540 | 24,395 | 69,845 |
| 1986 | 145,199 | 21,157 | 20,218 | 21,853 | 63,228 |
| 1985 | 148,171 | 20,309 | 21,516 | 22,901 | 64,726 |
| 1984 | 148,500 | 20,100 | 21,500 | 23,300 | 64,900 |
| 1983 | 147,200 | 19,500 | 21,200 | 22,600 | 63,300 |
| 1982 | 146,100 | 19,000 | 21,700 | 22,800 | 63,500 |
| 1981 | 145,500 | 19,000 | 21,300 | 20,300 | 60,600 |
| 1980 | 139,200 | 17,700 | 20,500 | 21,300 | 59,500 |
| 1979 | 154,800 | 18,800 | 23,500 | 23,900 | 66,200 |
| 1978 | 151,100 | 18,300 | 22,400 | 22,800 | 63,500 |
| 1977 | 142,000 | 16,300 | 21,600 | 21,500 | 59,400 |
| 1976 | 146,768 | 16,534 | 22,180 | 22,304 | 61,018 |
| 1975 | 137,992 | 15,413 | 20,306 | 20,292 | 56,011 |
| 1974 | 149,619 | 16,728 | 22,158 | 21,944 | 60,830 |
| 1973 | 141,589 | 14,682 | 21,880 | 20,962 | 57,524 |
| 1972 | 139,280 | 14,804 | 21,510 | 21,114 | 57,428 |
| 1971 | 146,338 | 14,727 | 22,787 | 21,378 | 58,892 |
| 1970 | 160,826 | 15,685 | 25,195 | 23,896 | 64,776 |
| 1969 | 158,894 | 14,959 | 24,611 | 22,649 | 62,219 |
| 1968 | 155,038 | 11,903 | 22,998 | 21,209 | 56,110 |
| 1967 | 164,502 | 13,617 | 23,954 | 21,507 | 59,078 |
| 1966 | 164,077 | 13,524 | 24,375 | 21,407 | 59,306 |

Source: (1966-1977) Statistics Canada "Fertilizer Trade", (Catalogue No. 46-207)
(1978-1991) Atlantic Fertilizer Institute

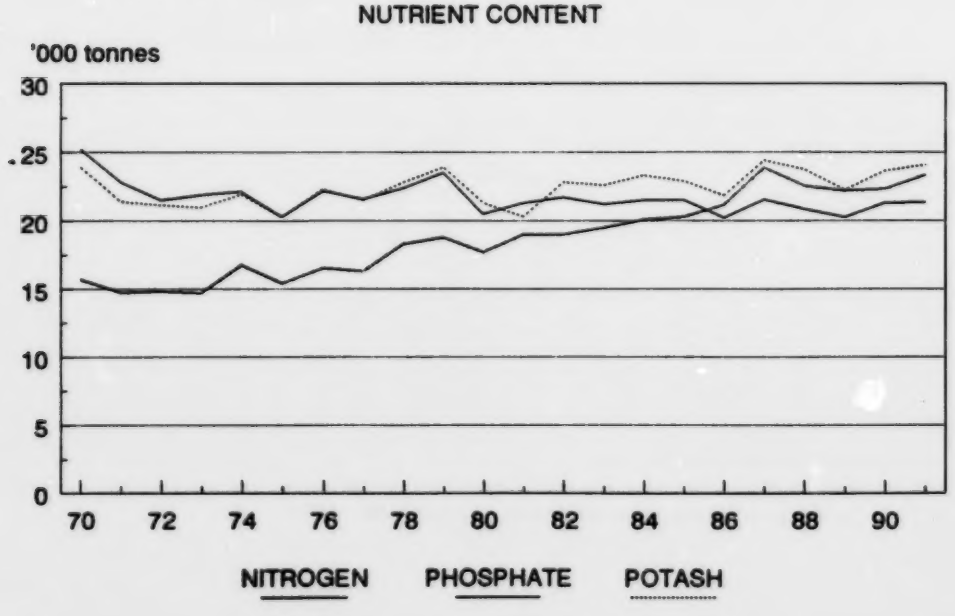


**TABLE 2.2 FERTILIZER SOLD AND NUTRIENT CONTENT, QUEBEC**

| Year Ending June 30 | Total Fertilizer Sold | Nutrient Content | | | |
|---|---|---|---|---|---|
| | | Nitrogen (N) | Phosphate ($P_2O_5$) | Potash ($K_2O$) | All Nutrients (N + P + K) |
| | | (tonnes) | | | |
| 1991 | 482,540 | 91,760 | 65,727 | 87,505 | 244,992 |
| 1990 | 507,599 | 95,245 | 73,381 | 89,593 | 258,219 |
| 1989 | 517,762 | 93,446 | 75,181 | 93,357 | 261,984 |
| 1988 | 527,685 | 94,500 | 76,434 | 95,809 | 266,743 |
| 1987 | 521,224 | 90,692 | 76,404 | 95,457 | 262,553 |
| 1986 | 519,519 | 89,443 | 77,152 | 94,542 | 261,137 |
| 1985 | 498,785 | 83,315 | 73,801 | 92,683 | 249,799 |
| 1984 | 473,100 | 74,400 | 75,700 | 83,900 | 234,000 |
| 1983 | 433,400 | 62,400 | 67,900 | 82,500 | 212,800 |
| 1982 | 433,400 | 64,400 | 68,600 | 73,700 | 206,700 |
| 1981 | 420,000 | 61,400 | 61,000 | 69,000 | 191,400 |
| 1980 | 406,800 | 54,900 | 62,700 | 70,600 | 188,200 |
| 1979 | 421,700 | 49,800 | 62,900 | 80,700 | 193,400 |
| 1978 | 386,200 | 40,600 | 65,700 | 63,900 | 170,200 |
| 1977 | 361,600 | 43,400 | 60,800 | 65,830 | 170,030 |
| 1976 | 349,390 | 40,399 | 60,286 | 69,577 | 170,262 |
| 1975 | 329,895 | 33,519 | 44,928 | 50,889 | 129,336 |
| 1974 | 340,575 | 34,120 | 48,272 | 52,576 | 134,968 |
| 1973 | 311,604 | 27,793 | 44,671 | 47,822 | 120,286 |
| 1972 | 311,013 | 27,404 | 44,460 | 47,806 | 119,670 |
| 1971 | 302,464 | 25,687 | 39,782 | 47,599 | 113,068 |
| 1970 | 278,572 | 22,050 | 39,143 | 41,409 | 102,602 |
| 1969 | 271,977 | 19,725 | 37,981 | 39,812 | 97,518 |
| 1968 | 252,122 | 17,873 | 35,251 | 36,378 | 89,502 |
| 1967 | 251,408 | 15,963 | 36,402 | 33,614 | 85,979 |
| 1966 | 223,034 | 12,828 | 32,465 | 29,439 | 74,732 |

Source: (1966-1977) Statistics Canada "Fertilizer Trade", (Catalogue No. 46-207)
(1978-1991) Quebec Fertilizer Manufacturers' Association

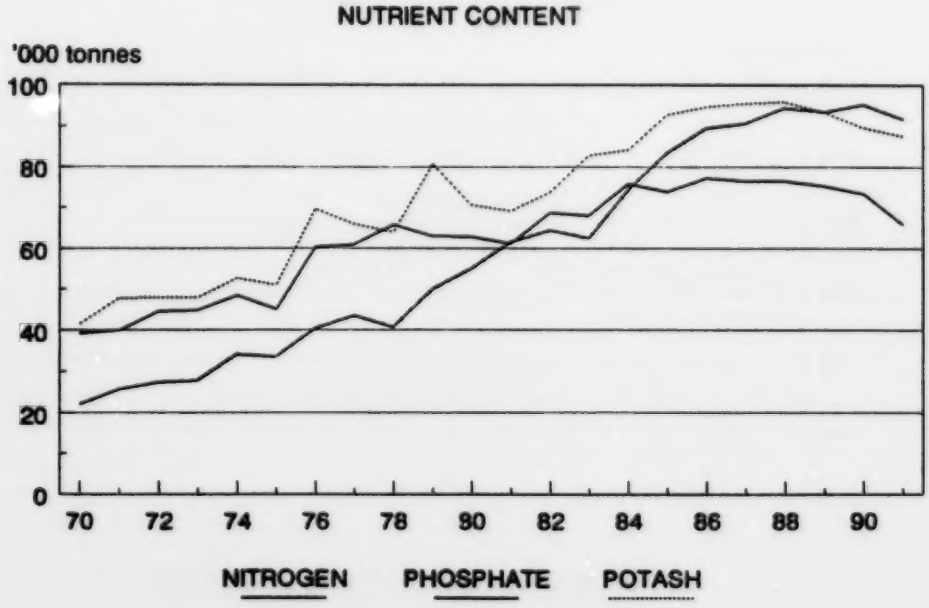


**TABLE 2.3 FERTILIZER SOLD AND NUTRIENT CONTENT, ONTARIO**

| Year Ending June 30 | Total Fertilizer Sold | Nutrient Content | | | |
|---|---|---|---|---|---|
| | | Nitrogen (N) | Phosphate (P2O5) | Potash (K2O) | All Nutrients (N + P + K) |
| | | | (tonnes) | | |
| 1991 | 821,783 | 174,860 | 102,124 | 151,231 | 428,215 |
| 1990 | 889,023 | 190,013 | 97,954 | 166,008 | 453,975 |
| 1989 | 909,487 | 191,670 | 110,912 | 165,246 | 467,828 |
| 1988 | 1,029,545 | 210,215 | 117,563 | 204,496 | 532,274 |
| 1987 | 1,012,534 | 216,466 | 120,677 | 183,269 | 520,412 |
| 1986 | 1,036,200 | 213,916 | 135,889 | 186,698 | 536,503 |
| 1985 | 1,162,175 | 237,409 | 152,021 | 216,156 | 605,586 |
| 1984 | 1,146,400 | 209,300 | 147,300 | 209,000 | 565,600 |
| 1983 | 1,031,900 | 199,000 | 151,400 | 173,000 | 523,400 |
| 1982 | 1,070,900 | 200,400 | 155,400 | 183,200 | 539,000 |
| 1981 | 1,137,900 | 205,600 | 153,100 | 210,000 | 568,700 |
| 1980 | 1,125,400 | 169,000 | 157,000 | 191,000 | 517,000 |
| 1979 | 1,185,000 | 174,700 | 169,100 | 183,000 | 526,800 |
| 1978 | 1,082,400 | 166,900 | 148,900 | 154,200 | 470,000 |
| 1977 | 952,200 | 157,500 | 144,400 | 131,200 | 433,100 |
| 1976 | 862,000 | 161,364 | 145,039 | 132,269 | 438,672 |
| 1975 | 894,392 | 152,952 | 126,036 | 120,157 | 399,145 |
| 1974 | 913,693 | 165,860 | 133,970 | 118,495 | 418,325 |
| 1973 | 849,957 | 127,895 | 128,638 | 114,763 | 371,296 |
| 1972 | 821,016 | 128,919 | 121,307 | 107,838 | 358,064 |
| 1971 | 811,702 | 130,433 | 117,278 | 106,750 | 354,461 |
| 1970 | 781,692 | 122,402 | 113,309 | 102,838 | 338,549 |
| 1969 | 711,233 | 89,774 | 107,596 | 100,417 | 297,787 |
| 1968 | 758,048 | 98,440 | 109,772 | 101,390 | 309,602 |
| 1967 | 746,799 | 83,075 | 108,867 | 100,682 | 292,624 |
| 1966 | 662,658 | 68,673 | 96,826 | 86,147 | 251,646 |

Source: (1966-1977) Statistics Canada, "Fertilizer Trade", (Catalogue No. 46-207)
(1978-1991) The Fertilizer Institute of Ontario

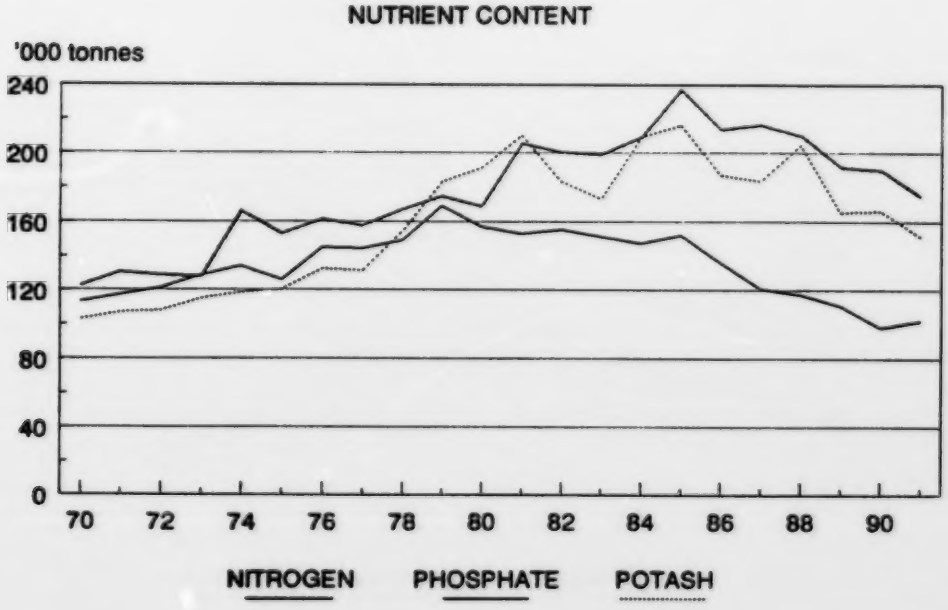


**TABLE 2.4 FERTILIZER SOLD AND NUTRIENT CONTENT, EASTERN CANADA**

| Year Ending June 30 | Total Fertilizer Sold | Nutrient Content | | | |
|---|---|---|---|---|---|
| | | Nitrogen (N) | Phosphate ($P_2O_5$) | Potash ($K_2O$) | All Nutrients (N + P + K) |
| | | | (tonnes) | | |
| 1991 | 1,452,413 | 289,956 | 189,193 | 262,784 | 741,933 |
| 1990 | 1,542,030 | 307,614 | 192,638 | 279,239 | 779,491 |
| 1989 | 1,570,720 | 307,319 | 206,368 | 280,873 | 794,560 |
| 1988 | 1,705,071 | 327,261 | 214,629 | 324,028 | 866,118 |
| 1987 | 1,688,383 | 331,068 | 218,621 | 303,101 | 852,790 |
| 1986 | 1,700,918 | 324,516 | 233,259 | 303,093 | 860,868 |
| 1985 | 1,786,962 | 339,153 | 245,346 | 329,620 | 914,119 |
| 1984 | 1,768,000 | 303,800 | 244,500 | 316,200 | 864,500 |
| 1983 | 1,612,500 | 280,900 | 240,500 | 278,100 | 799,500 |
| 1982 | 1,650,400 | 283,800 | 245,700 | 279,700 | 809,200 |
| 1981 | 1,703,400 | 264,400 | 235,400 | 299,600 | 799,400 |
| 1980 | 1,671,400 | 241,600 | 240,200 | 282,900 | 764,700 |
| 1979 | 1,761,500 | 243,300 | 255,500 | 287,600 | 786,400 |
| 1978 | 1,619,900 | 225,800 | 237,000 | 240,900 | 703,700 |
| 1977 | 1,491,379 | 217,193 | 226,800 | 218,538 | 662,531 |
| 1976 | 1,482,100 | 218,297 | 227,505 | 224,150 | 669,952 |
| 1975 | 1,362,040 | 201,884 | 191,270 | 191,338 | 584,492 |
| 1974 | 1,403,634 | 216,708 | 204,400 | 193,015 | 614,123 |
| 1973 | 1,302,915 | 170,370 | 195,189 | 183,547 | 549,106 |
| 1972 | 1,271,080 | 171,127 | 187,277 | 176,758 | 535,162 |
| 1971 | 1,260,278 | 170,847 | 179,849 | 175,727 | 526,423 |
| 1970 | 1,220,875 | 160,137 | 177,647 | 168,143 | 505,927 |
| 1969 | 1,141,905 | 124,458 | 170,188 | 162,878 | 457,524 |
| 1968 | 1,165,003 | 128,216 | 168,021 | 158,977 | 455,214 |
| 1967 | 1,162,500 | 112,655 | 169,223 | 155,803 | 437,681 |
| 1966 | 1,140,387 | 95,025 | 153,666 | 136,993 | 385,684 |

Source: Summation of figures from Tables 2.1 to 2.3 inclusive.

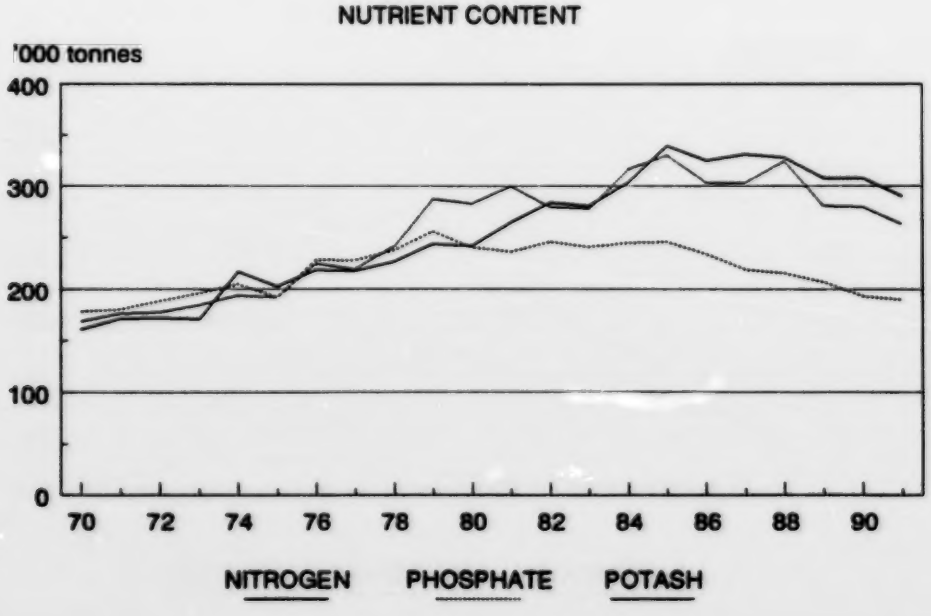


**TABLE 2.5 FERTILIZER SOLD AND NUTRIENT CONTENT, MANITOBA**

| Year Ending June 30 | Total Fertilizer Sold | Nutrient Content | | | |
|---|---|---|---|---|---|
| | | Nitrogen (N) | Phosphate ($P_2O_5$) | Potash ($K_2O$) | All Nutrients (N + P + K) |
| | | | (tonnes) | | |
| 1991 | 704,268 | 259,890 | 103,614 | 24,082 | 387,586 |
| 1990 | 662,754 | 232,597 | 104,192 | 24,473 | 361,262 |
| 1989 | 637,191 | 221,422 | 99,500 | 22,575 | 343,497 |
| 1988 | 705,869 | 248,010 | 110,573 | 24,662 | 383,245 |
| 1987 | 623,113 | 222,500 | 96,980 | 20,649 | 340,129 |
| 1986 | 673,475 | 235,960 | 105,429 | 19,396 | 360,785 |
| 1985 | 669,484 | 236,089 | 105,915 | 20,568 | 362,572 |
| 1984 | 588,686 | 205,114 | 103,319 | 17,661 | 326,094 |
| 1983 | 523,556 | 171,453 | 84,963 | 16,383 | 272,799 |
| 1982 | 521,187 | 167,107 | 85,520 | 21,526 | 274,153 |
| 1981 | 516,996 | 154,448 | 91,922 | 20,517 | 266,887 |
| 1980 | 548,692 | 172,374 | 94,447 | 19,459 | 286,280 |
| 1979 | 543,874 | 176,021 | 94,460 | 12,757 | 283,238 |
| 1978 | 455,810 | 136,857 | 82,454 | 8,901 | 228,212 |
| 1977 | 367,106 | 106,962 | 68,660 | 1,952 | 177,574 |
| 1976 | 369,358 | 118,962 | 71,887 | 2,918 | 193,767 |
| 1975 | 344,649 | 91,365 | 73,815 | 2,331 | 167,511 |
| 1974 | 326,241 | 87,586 | 70,672 | 1,316 | 159,574 |
| 1973 | 277,588 | 71,430 | 57,201 | 1,710 | 130,341 |
| 1972 | 196,502 | 47,390 | 39,643 | 1,363 | 88,396 |
| 1971 | 177,210 | 44,905 | 41,300 | 1,323 | 87,528 |
| 1970 | 120,336 | 30,256 | 28,644 | 1,412 | 60,312 |
| 1969 | 128,097 | 30,196 | 26,821 | 1,192 | 58,209 |
| 1968 | 219,776 | 52,083 | 48,642 | 1,416 | 102,141 |
| 1967 | 164,324 | 34,719 | 41,195 | 1,129 | 77,043 |
| 1966 | 139,147 | 26,762 | 37,769 | 686 | 65,217 |

Source: (1966-1977) Statistics Canada, "Fertilizer Trade", (Catalogue No. 46-207)
(1978-1991) Western Canada Fertilizer Association and the Potash and Phosphate Institute

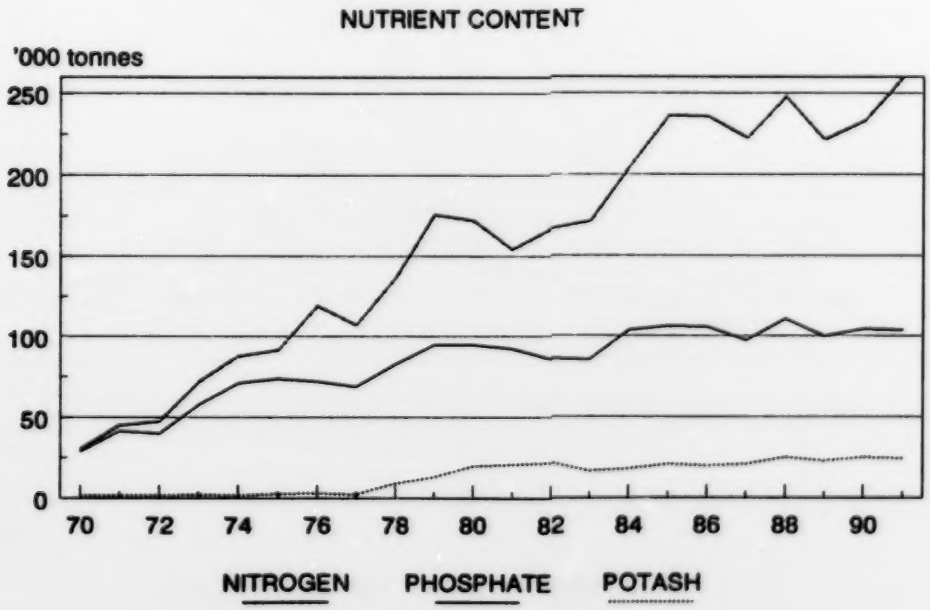


**TABLE 2.6 FERTILIZER SOLD AND NUTRIENT CONTENT, SASKATCHEWAN**

| Year Ending June 30 | Total Fertilizer Sold | Nutrient Content | | | |
|---|---|---|---|---|---|
| | | Nitrogen (N) | Phosphate ($P_2O_5$) | Potash ($K_2O$) | All Nutrients (N + P + K) |
| | | (tonnes) | | | |
| 1991 | 726,646 | 247,346 | 133,700 | 9,537 | 390,583 |
| 1990 | 799,637 | 274,194 | 149,461 | 12,374 | 436,029 |
| 1989 | 745,307 | 244,723 | 143,860 | 11,726 | 400,309 |
| 1988 | 832,387 | 266,044 | 157,939 | 18,967 | 442,950 |
| 1987 | 812,431 | 274,815 | 157,335 | 12,415 | 444,565 |
| 1986 | 926,651 | 317,800 | 185,537 | 12,724 | 516,061 |
| 1985 | 885,055 | 296,395 | 184,961 | 11,549 | 492,905 |
| 1984 | 876,162 | 289,261 | 186,296 | 9,276 | 484,833 |
| 1983 | 742,680 | 222,499 | 160,593 | 7,703 | 390,795 |
| 1982 | 630,650 | 191,974 | 143,185 | 11,738 | 346,897 |
| 1981 | 582,301 | 167,734 | 140,053 | 9,922 | 317,709 |
| 1980 | 513,932 | 142,700 | 115,530 | 7,382 | 265,612 |
| 1979 | 527,868 | 138,128 | 125,409 | 3,121 | 266,658 |
| 1978 | 432,490 | 104,825 | 117,653 | 638 | 223,116 |
| 1977 | 298,239 | 66,658 | 88,340 | 382 | 155,380 |
| 1976 | 284,092 | 56,351 | 89,252 | 764 | 146,367 |
| 1975 | 309,088 | 55,700 | 106,527 | 582 | 162,809 |
| 1974 | 277,060 | 49,328 | 94,070 | 636 | 144,034 |
| 1973 | 194,140 | 35,482 | 65,686 | 290 | 101,458 |
| 1972 | 118,403 | 20,707 | 40,201 | 4,575 | 65,483 |
| 1971 | 93,999 | 15,750 | 34,331 | 200 | 50,281 |
| 1970 | 57,878 | 10,052 | 20,423 | 128 | 30,603 |
| 1969 | 118,895 | 18,733 | 45,024 | 155 | 63,912 |
| 1968 | 243,280 | 40,491 | 87,903 | 628 | 129,022 |
| 1967 | 241,172 | 43,680 | 78,339 | 393 | 122,412 |
| 1966 | 194,782 | 31,153 | 68,708 | 252 | 100,113 |

Source: (1966-1977) Statistics Canada, "Fertilizer Trade", (Catalogue No. 46-207)
(1976-1991) Western Canada Fertilizer Association and the Potash and Phosphate Institute

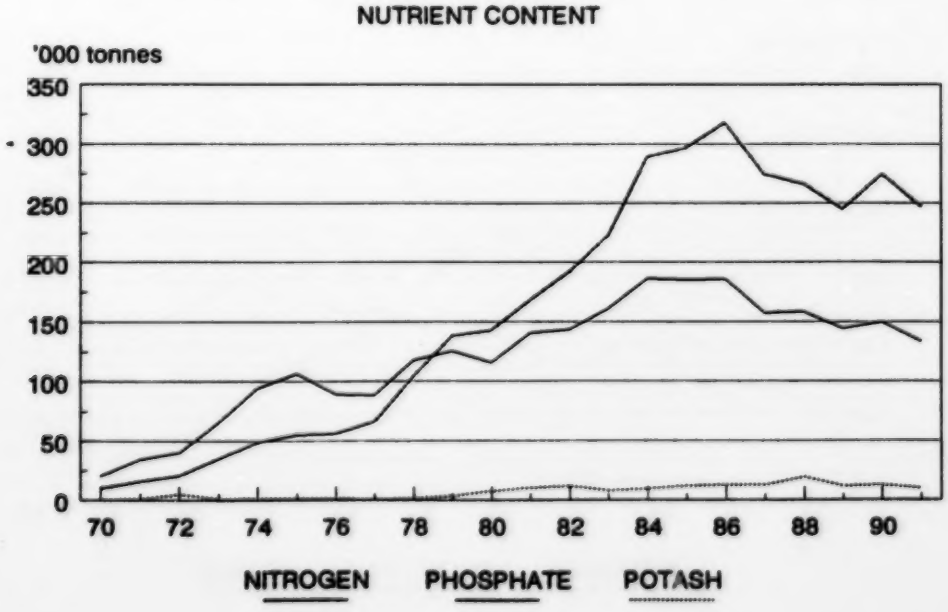


**TABLE 2.7 FERTILIZER SOLD AND NUTRIENT CONTENT, ALBERTA**

| Year Ending June 30 | Total Fertilizer Sold | Nutrient Content | | | |
|---|---|---|---|---|---|
| | | Nitrogen (N) | Phosphate ($P_2O_5$) | Potash ($K_2O$) | All Nutrients (N + P + K) |
| | | (tonnes) | | | |
| 1991 | 949,477 | 337,094 | 140,180 | 35,007 | 512,281 |
| 1990 | 992,499 | 352,218 | 154,816 | 36,410 | 543,444 |
| 1989 | 967,354 | 346,536 | 148,954 | 32,530 | 528,020 |
| 1988 | 894,966 | 315,796 | 137,369 | 29,199 | 482,364 |
| 1987 | 843,466 | 289,186 | 140,197 | 26,348 | 455,731 |
| 1986 | 884,351 | 308,908 | 154,600 | 28,282 | 491,790 |
| 1985 | 995,157 | 353,469 | 174,067 | 27,420 | 554,956 |
| 1984 | 924,488 | 335,906 | 166,831 | 27,467 | 530,204 |
| 1983 | 869,116 | 303,815 | 162,294 | 26,098 | 492,207 |
| 1982 | 845,803 | 299,360 | 148,418 | 22,604 | 470,382 |
| 1981 | 859,233 | 302,154 | 154,623 | 23,434 | 480,211 |
| 1980 | 729,059 | 249,603 | 134,181 | 24,798 | 408,582 |
| 1979 | 748,891 | 247,611 | 119,724 | 15,374 | 382,709 |
| 1978 | 696,476 | 222,215 | 129,701 | 13,775 | 365,691 |
| 1977 | 585,937 | 194,691 | 108,972 | 2,282 | 305,945 |
| 1976 | 576,911 | 180,508 | 104,972 | 7,268 | 292,748 |
| 1975 | 569,341 | 166,399 | 118,884 | 3,262 | 288,545 |
| 1974 | 523,999 | 145,043 | 113,404 | 2,114 | 260,561 |
| 1973 | 422,366 | 121,738 | 87,721 | 1,229 | 210,688 |
| 1972 | 327,478 | 85,909 | 64,772 | 2,529 | 153,210 |
| 1971 | 317,518 | 80,999 | 61,983 | 1,581 | 144,563 |
| 1970 | 240,457 | 58,651 | 46,382 | 1,292 | 106,325 |
| 1969 | 281,912 | 70,582 | 65,504 | 863 | 136,949 |
| 1968 | 401,778 | 91,426 | 87,202 | 1,372 | 180,000 |
| 1967 | 361,913 | 78,342 | 78,056 | 746 | 157,144 |
| 1966 | 286,775 | 58,168 | 65,713 | 271 | 124,152 |

Source: (1966-1977) Statistics Canada, "Fertilizer Trade", (Catalogue No. 46-207)
(1978-1991) Western Canada Fertilizer Association and the Potash and Phosphate Institute

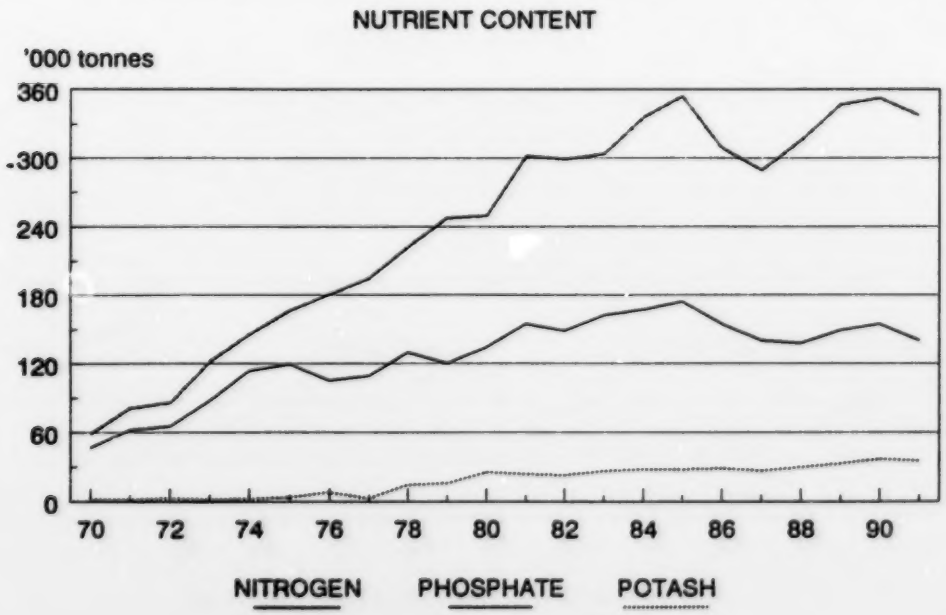


**TABLE 2.8 FERTILIZER SOLD AND NUTRIENT CONTENT, PRAIRIES**

| Year Ending June 30 | Total Fertilizer Sold | Nutrient Content | | | |
|---|---|---|---|---|---|
| | | Nitrogen (N) | Phosphate ($P_2O_5$) | Potash ($K_2O$) | All Nutrients (N + P + K) |
| | | | (tonnes) | | |
| 1991 | 2,380,391 | 844,330 | 377,494 | 68,626 | 1,290,450 |
| 1990 | 2,454,890 | 859,009 | 408,469 | 73,257 | 1,340,735 |
| 1989 | 2,349,852 | 812,681 | 392,314 | 66,831 | 1,271,826 |
| 1988 | 2,433,222 | 829,850 | 405,881 | 72,828 | 1,308,559 |
| 1987 | 2,279,010 | 786,501 | 394,512 | 59,412 | 1,240,425 |
| 1986 | 2,484,477 | 862,668 | 445,566 | 60,402 | 1,368,636 |
| 1985 | 2,549,696 | 885,953 | 464,943 | 59,537 | 1,410,433 |
| 1984 | 2,389,336 | 830,281 | 456,446 | 54,404 | 1,341,131 |
| 1983 | 2,135,352 | 697,767 | 407,850 | 50,184 | 1,155,801 |
| 1982 | 1,997,640 | 658,441 | 377,123 | 55,868 | 1,091,432 |
| 1981 | 1,958,530 | 624,336 | 386,598 | 53,873 | 1,064,807 |
| 1980 | 1,791,683 | 564,677 | 344,158 | 51,639 | 960,474 |
| 1979 | 1,820,633 | 561,760 | 339,593 | 31,252 | 932,605 |
| 1978 | 1,584,776 | 463,897 | 329,808 | 23,314 | 817,019 |
| 1977 | 1,251,282 | 368,311 | 265,972 | 4,616 | 638,899 |
| 1976 | 1,230,361 | 355,821 | 266,111 | 10,950 | 632,882 |
| 1975 | 1,223,078 | 313,464 | 299,226 | 6,175 | 618,865 |
| 1974 | 1,127,300 | 281,957 | 278,146 | 4,066 | 564,169 |
| 1973 | 894,094 | 228,650 | 210,608 | 3,229 | 442,487 |
| 1972 | 642,383 | 154,006 | 144,616 | 8,467 | 307,089 |
| 1971 | 588,727 | 141,654 | 137,614 | 3,104 | 282,372 |
| 1970 | 418,671 | 98,959 | 95,449 | 2,832 | 197,240 |
| 1969 | 528,904 | 119,511 | 137,349 | 2,210 | 259,070 |
| 1968 | 864,834 | 184,000 | 223,747 | 3,416 | 411,163 |
| 1967 | 767,409 | 156,741 | 197,590 | 2,268 | 356,599 |
| 1966 | 620,704 | 116,083 | 172,190 | 1,209 | 289,482 |

Source: Summation of figures from tables 2.5, 2.6 and 2.7.

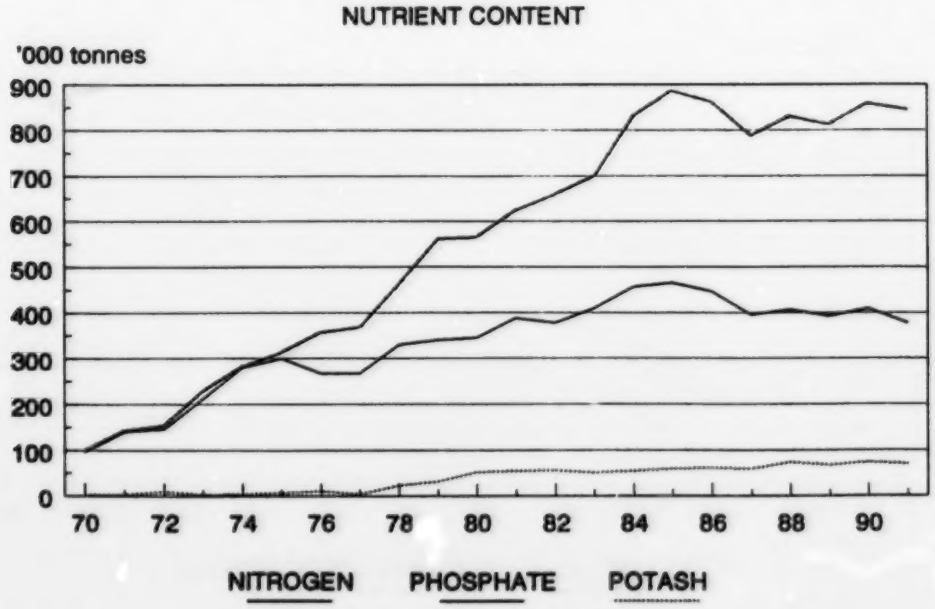
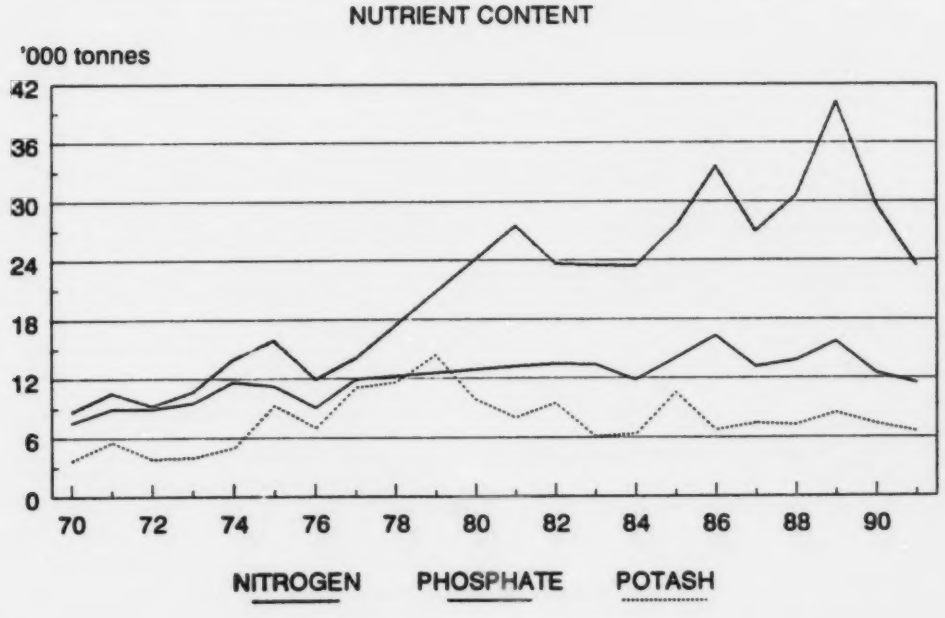


**TABLE 2.9 FERTILIZER SOLD AND NUTRIENT CONTENT, BRITISH COLUMBIA**

| Year Ending June 30 | Total Fertilizer Sold | Nutrient Content | | | |
|---|---|---|---|---|---|
| | | Nitrogen (N) | Phosphate ($P_2O_5$) | Potash ($K_2O$) | All Nutrients (N + P + K) |
| | | (tonnes) | | | |
| 1991 | 88,810 | 23,477 | 11,512 | 6,481 | 41,470 |
| 1990 | 108,022 | 29,669 | 12,470 | 7,347 | 49,486 |
| 1989 | 127,653 | 40,166 | 15,687 | 8,438 | 64,291 |
| 1988 | 103,005 | 30,542 | 13,765 | 7,184 | 51,491 |
| 1987 | 95,026 | 26,972 | 13,126 | 7,363 | 47,461 |
| 1986 | 114,596 | 33,537 | 16,285 | 6,706 | 56,528 |
| 1985 | 102,996 | 27,425 | 13,998 | 10,560 | 51,983 |
| 1984 | 86,001 | 23,446 | 11,761 | 6,269 | 41,476 |
| 1983 | 94,558 | 23,472 | 13,335 | 6,055 | 42,862 |
| 1982 | 93,670 | 23,657 | 13,442 | 9,417 | 46,516 |
| 1981 | 96,409 | 27,485 | 13,149 | 7,950 | 48,584 |
| 1980 | 109,280 | N.A. | N.A. | 9,823 | N.A. |
| 1979 | 89,349 | N.A. | N.A. | 14,375 | N.A. |
| 1978 | 62,572 | N.A. | N.A. | 11,543 | N.A. |
| 1977 | 86,099 | 14,069 | 11,914 | 11,095 | 37,078 |
| 1976 | 67,925 | 11,924 | 9,004 | 6,958 | 27,886 |
| 1975 | 91,371 | 15,895 | 11,232 | 9,284 | 36,411 |
| 1974 | 77,437 | 13,930 | 11,646 | 4,941 | 30,517 |
| 1973 | 63,537 | 10,694 | 9,466 | 3,917 | 24,077 |
| 1972 | 58,430 | 9,259 | 8,892 | 3,825 | 21,976 |
| 1971 | 65,817 | 10,560 | 8,900 | 5,488 | 24,948 |
| 1970 | 54,426 | 8,590 | 7,511 | 3,624 | 19,725 |
| 1969 | 50,487 | 7,849 | 7,700 | 3,205 | 18,754 |
| 1968 | 49,846 | 7,151 | 7,424 | 3,679 | 18,254 |
| 1967 | 48,820 | 7,266 | 7,091 | 3,495 | 17,852 |
| 1966 | 50,352 | 7,069 | 7,571 | 3,597 | 18,237 |

Source: (1966-1977) Statistics Canada, "Fertilizer Trade", (Catalogue No. 46-207)
(1978-1991) Western Canada Fertilizer Association and the Potash and Phosphate Institute



## TABLE 2.10 FERTILIZER SOLD AND NUTRIENT CONTENT, WESTERN CANADA

| Year Ending June 30 | Total Fertilizer Sold | Nutrient Content | | | |
|---|---|---|---|---|---|
| | | Nitrogen (N) | Phosphate ($P_2O_5$) | Potash ($K_2O$) | All Nutrients (N + P + K) |
| | | (tonnes) | | | |
| 1991 | 2,469,201 | 867,807 | 389,006 | 75,107 | 1,331,920 |
| 1990 | 2,562,912 | 888,678 | 420,939 | 80,605 | 1,390,222 |
| 1989 | 2,477,505 | 852,847 | 408,001 | 75,269 | 1,336,117 |
| 1988 | 2,536,227 | 860,392 | 419,646 | 80,012 | 1,360,050 |
| 1987 | 2,380,273 | 813,473 | 407,638 | 66,789 | 1,287,900 |
| 1986 | 2,599,073 | 896,205 | 461,851 | 67,108 | 1,425,164 |
| 1985 | 2,647,675 | 913,378 | 478,941 | 70,097 | 1,462,416 |
| 1984 | 2,475,340 | 853,700 | 468,200 | 60,459 | 1,382,360 |
| 1983 | 2,229,910 | 721,000 | 411,200 | 59,601 | 1,191,800 |
| 1982 | 2,091,310 | 682,100 | 390,600 | 63,818 | 1,136,520 |
| 1981 | 2,054,940 | 651,800 | 399,700 | 63,696 | 1,115,200 |
| 1980 | 1,900,960 | 589,500 | 387,500 | 66,014 | 1,043,014 |
| 1979 | 1,909,980 | 591,100 | 374,500 | 42,795 | 1,008,395 |
| 1978 | 1,647,350 | 529,500 | 356,600 | 31,716 | 917,816 |
| 1977 | 1,337,380 | 381,900 | 275,900 | 15,711 | 673,511 |
| 1976 | 1,298,290 | 367,745 | 275,115 | 17,908 | 660,768 |
| 1975 | 1,314,450 | 329,359 | 310,458 | 15,459 | 655,280 |
| 1974 | 1,204,737 | 295,887 | 289,792 | 9,007 | 594,686 |
| 1973 | 957,631 | 239,344 | 220,074 | 7,146 | 466,564 |
| 1972 | 700,813 | 163,265 | 153,508 | 12,292 | 329,065 |
| 1971 | 654,544 | 152,214 | 146,514 | 8,593 | 307,321 |
| 1970 | 473,097 | 107,549 | 102,960 | 6,456 | 216,965 |
| 1969 | 579,391 | 127,360 | 145,049 | 5,415 | 277,824 |
| 1968 | 914,680 | 191,151 | 231,171 | 7,095 | 429,420 |
| 1967 | 816,229 | 164,007 | 204,681 | 5,763 | 374,451 |
| 1966 | 671,056 | 123,152 | 179,761 | 4,806 | 307,719 |

Source: Summation of figures from Tables 2.5, 2.6, 2.7 and 2.9.

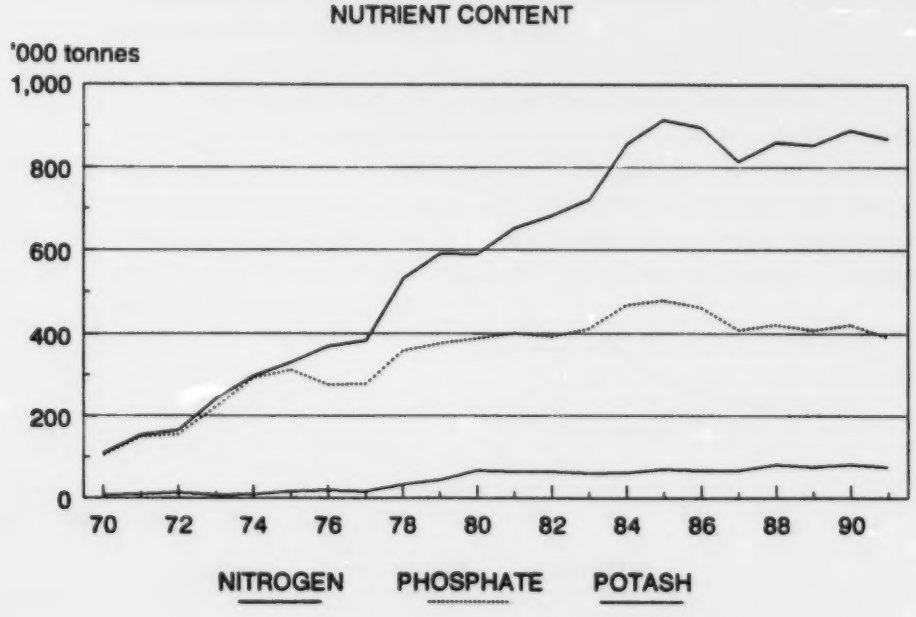
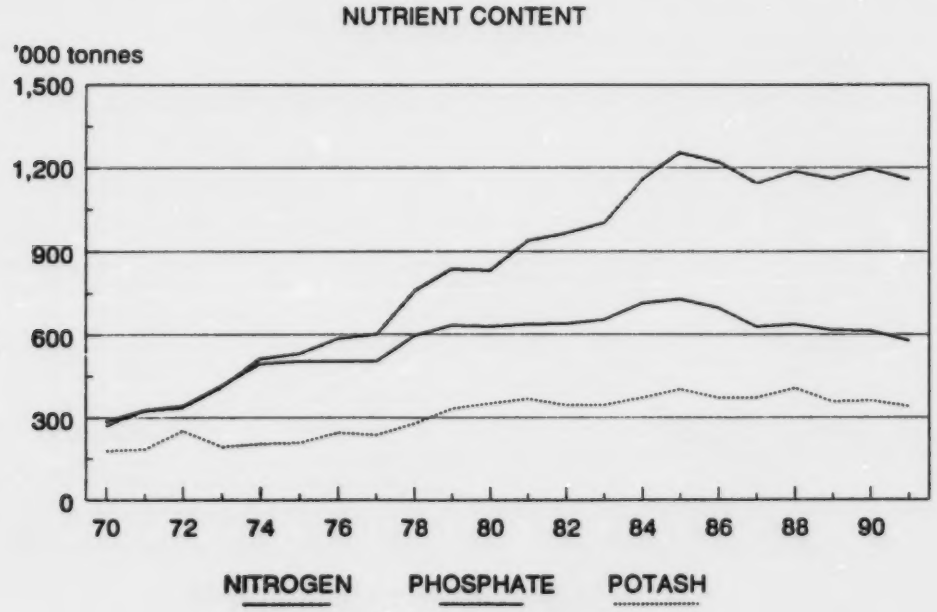


**TABLE 2.11 FERTILIZER SOLD AND NUTRIENT CONTENT, CANADA**

| Year Ending June 30 | Total Fertilizer Sold | Nutrient Content | | | |
|---|---|---|---|---|---|
| | | Nitrogen (N) | Phosphate ($P_2O_5$) | Potash ($K_2O$) | All Nutrients (N + P + K) |
| | | | (tonnes) | | |
| 1991 | 3,921,614 | 1,157,763 | 578,199 | 337,891 | 2,073,853 |
| 1990 | 4,104,942 | 1,196,292 | 613,577 | 359,844 | 2,169,713 |
| 1989 | 4,046,225 | 1,160,166 | 614,369 | 356,142 | 2,130,677 |
| 1988 | 4,241,298 | 1,187,653 | 634,475 | 404,040 | 2,226,168 |
| 1987 | 4,068,656 | 1,144,541 | 626,259 | 369,890 | 2,140,690 |
| 1986 | 4,299,991 | 1,220,721 | 695,110 | 370,201 | 2,286,032 |
| 1985 | 4,434,637 | 1,252,531 | 724,287 | 399,717 | 2,376,535 |
| 1984 | 4,243,340 | 1,157,500 | 712,700 | 376,659 | 2,246,859 |
| 1983 | 3,842,410 | 1,001,900 | 651,700 | 337,701 | 1,991,301 |
| 1982 | 3,741,710 | 965,900 | 636,300 | 343,518 | 1,945,718 |
| 1981 | 3,758,340 | 916,200 | 635,100 | 363,296 | 1,914,596 |
| 1980 | 3,572,360 | 831,100 | 627,700 | 348,914 | 1,807,714 |
| 1979 | 3,671,480 | 834,400 | 630,000 | 330,395 | 1,794,795 |
| 1978 | 3,267,250 | 755,300 | 593,600 | 272,616 | 1,621,516 |
| 1977 | 2,828,759 | 599,093 | 502,700 | 234,249 | 1,336,042 |
| 1976 | 2,780,390 | 586,042 | 502,620 | 242,058 | 1,330,720 |
| 1975 | 2,676,490 | 531,243 | 501,728 | 206,797 | 1,239,768 |
| 1974 | 2,608,371 | 512,595 | 494,192 | 202,022 | 1,208,809 |
| 1973 | 2,260,546 | 409,714 | 415,263 | 190,693 | 1,015,670 |
| 1972 | 1,971,893 | 334,392 | 340,785 | 189,050 | 864,227 |
| 1971 | 1,914,822 | 323,061 | 326,363 | 184,320 | 833,744 |
| 1970 | 1,693,972 | 267,686 | 280,607 | 174,599 | 722,892 |
| 1969 | 1,721,296 | 251,818 | 315,237 | 168,293 | 735,348 |
| 1968 | 2,079,683 | 319,367 | 399,192 | 166,072 | 884,631 |
| 1967 | 1,978,729 | 276,662 | 373,904 | 161,566 | 812,132 |
| 1966 | 1,811,443 | 218,177 | 333,427 | 141,799 | 693,403 |

Source: Summation of figures from Tables 2.4 and 2.10.



# 3. FERTILIZER SHIPMENT DATA

The fertilizer shipment data is derived from information on the province of destination for fertilizer shipments from the following domestic fertilizer manufacturers:

Canadian Fertilizers Limited
C-I-L Inc.
Cominco Fertilizer
Cyanamid Canada Ltd.
Esso Chemical Canada
Glacier Ammonia Co.
Nitrochem Inc.
Noranda Sales Corp. Ltd.
Ocelot Ammonia Co.
Simplot Chemical Co.
Sherritt Gordon Ltd.
Western Co-operative Fertilizers Ltd.

Data on potash shipments are provided by the Potash and Phosphate Institute. All shipment information is compiled and presented by the Canadian Fertilizer Information System.

Shipments to different provinces are different from actual consumption, as shipments do not account for fertilizer imported from other countries. Furthermore, fertilizer shipped in a particular fertilizer year is not necessarily consumed in that period. Shipments tend to represent the original provincial destination of fertilizer once it leaves the manufacturer and do not account for fertilizer which is shipped to other provinces or exported after reaching that destination.

**TABLE 3.1 SHIPMENTS TO DOMESTIC AND EXPORT MARKETS OF FERTILIZER OF DOMESTIC MANUFACTURE YEAR ENDED JUNE 30, 1991**

| | Domestic Market | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Atlantic Provinces | Quebec | Ontario | Manitoba | Sask. | Alberta | British Columbia | Canada Total |
| | (tonnes) | | | | | | | |
| **Nitrogen:** | | | | | | | | |
| Urea | 6,095 | 42,944 | 142,211 | 184,301 | 274,177 | 301,770 | 24,964 | 976,462 |
| Ammonium Sulphate | - | 69 | 41 | 24,777 | 42,490 | 59,946 | 7,189 | 134,512 |
| Ammonium Nitrate | 29,391 | 24,277 | 75,964 | 71,856 | 26,705 | 74,655 | 8,946 | 311,794 |
| Anhydrous Ammonia | 215 | 3,262 | 43,991 | 150,965 | 91,774 | 169,374 | 2,611 | 462,192 |
| **Phosphates:** | | | | | | | | |
| Monoammonium Phosphate | – | – | 44 | 136,865 | 239,125 | 244,638 | 17,221 | 637,893 |
| Diammonium Phosphate | (1) | (1) | (1) | (1) | (1) | (1) | (1) | (1) |
| **Potash:** | | | | | | | | |
| Muriate of Potash | 48,405 | 129,892 | 260,686 | 39,479 | 15,635 | 57,388 | 10,624 | 562,109 |
| Other (2) | – | – | 91 | 35,168 | 18,329 | 20,814 | 3,761 | 78,163 |
| Total | 84,106 | 200,444 | 523,028 | 643,411 | 708,235 | 928,585 | 75,316 | 3,163,125 |

(continued)

| | Canada Total | Export Market | | Total Shipments (3) |
|---|---|---|---|---|
| | | U.S.A. | Offshore | |
| | (tonnes) | | | |
| **Nitrogen:** | | | | |
| Urea | 976,462 | 1,116,209 | 435,213 | 2,527,884 |
| Ammonium Sulphate | 134,512 | 198,849 | 28,848 | 362,209 |
| Ammonium Nitrate | 311,794 | 140,254 | - | 452,048 |
| Anhydrous Ammonia | 462,192 | 970,116 | - | 1,432,308 |
| **Phosphates:** | | | | |
| Monoammonium Phosphate | 637,893 | 38,430 | 11,475 | 687,798 |
| Diammonium Phosphate | (1) | (1) | (1) | 29,788 |
| **Potash:** | | | | |
| Muriate of Potash | 562,109 | 5,521,262 | 4,950,638 | 11,034,009 |
| Other (3) | 78,163 | 34,913 | - | 113,076 |
| Total | 3,163,125 | 8,020,033 | 5,426,174 | 16,639,120 |

1 To prevent disclosure of individual market shares, only the total shipments of diammonium phosphate are printed.

2 Includes phosphate and sulphur solutions, mixed fertilizer materials and elemental sulphur and sulphate fertilizers not elsewhere shown.

3 These are agricultural shipments. Statistics Canada uses total shipments including industrial.

Source: Canadian Fertilizer Information System, Canadian Fertilizer Institute

# 4. FERTILIZER TRADE

Fertilizer trade data are compiled by province of entry or exit by Statistics Canada. These data do not represent the province of origin of exports nor the province in which imports were ultimately utilized. They simply reflect the point at which the fertilizer crossed the international border. As very little traded fertilizer is actually transported between Eastern and Western Canada, exports which are observed to have occurred from one region will have originated there and imports entering that region will be consumed there[2]. Trade Statistics will therefore be relatively accurate on a regional basis (Table 4.1).

It should be noted that there are some discrepancies between these export figures and those in the shipment data of the previous section. Some of this is due to the fact that not all companies report their exports when submitting shipment information to the Canadian Fertilizer Information System (Table 3.1). Other discrepancies in export data have been attributed to differences in the fertilizer year in which certain exports were assumed to have taken place. In addition, some of the Statistics Canada trade statistics include urea and ammonium nitrate which are used industrially, while those recorded for the Canadian Fertilizer Information System only include the volume considered to be fertilizer grade.

[2]The principal exception to this is potash exports shipped out through Thunder Bay, Ontario. For the purposes of the following tables, potash which shows the province of export to be Ontario will be assumed to originate in western Canada.

## TABLE 4.1 FERTILIZER TRADE BY REGION AND ALL CANADA YEAR ENDED JUNE 30, 1991

| | Exports | | | Imports | | |
|---|---|---|---|---|---|---|
| | East | West | Total | East | West | Total |
| | | | (tonnes) | | | |
| **Nitrogen:** | | | | | | |
| Urea | 103,013 | 1,376,175 | 1,479,188 | 217,175 | 4,251 | 221,426 |
| Ammonium Sulphate | 17,975 | 191,485 | 209,460 | 14,479 | 2,493 | 16,972 |
| Ammonium Nitrate | 111,164 | 234,793 | 345,957 | - | - | - |
| Anhydrous Ammonia | 133,576 | 891,033 | 1,024,609 | 6,956 | 6,056 | 13,012 |
| Nitrogen Solutions | 62,428 | 30,180 | 92,608 | 10,523 | 5,385 | 15,908 |
| **Phosphate:** | | | | | | |
| Monoammonium Phosphate | 233 | 27,583 | 27,816 | 118,104 | 112,061 | 230,165 |
| Diammonium Phosphate | 4,894 | 332 | 5,226 | 230,494 | 1,635 | 232,129 |
| Triple Superphosphate | - | - | - | 25,061 | 381 | 25,442 |
| Normal Superphosphate | - | - | - | 17,679 | 1,706 | 19,385 |
| Other Phosphate | 859 | 44,118 | 44,977 | 5,256 | 8,289 | 13,545 |
| **Potash:** | | | | | | |
| Muriate of Potash | 1,352,146 | 9,659,741 (1) | 11,011,887 | 6,663 | 1,122 | 7,785 |
| Potassium Sulphate | - | - | - | 5,385 | 1,026 | 6,411 |
| Potassium Magnesium Sulphate | - | - | - | 68,446 | 2,519 | 70,965 |
| Prepared Mixtures | 19,752 | 806 | 20,558 | 4,147 | 4,474 | 8,621 |
| Other Fertilizer and Fertilizer Materials | 35,650 | 3,513 | 39,163 | 19,669 | 11,921 | 31,590 |
| TOTALS | 1,841,690 | 12,459,759 | 14,301,449 | 750,037 | 163,319 | 913,356 |

(1) Includes exports from Ontario, as most of these exports are western potash being shipped through Thunder Bay.

Source: Statistics Canada

## TABLE 4.2 NET FERTILIZER TRADE BY REGION AND CANADA YEAR ENDED JUNE 30, 1991

| | Net Exports | | | Net Imports | | |
|---|---|---|---|---|---|---|
| | East | West | Total | East | West | Total |
| | | | (tonnes) | | | |
| **Nitrogen:** | | | | | | |
| Urea | - | 1,371,924 | 1,257,762 | 114,162 | - | - |
| Ammonium Sulphate | 3,496 | 188,992 | 192,488 | - | - | - |
| Ammonium Nitrate | 111,164 | 234,793 | 345,957 | - | - | - |
| Anhydrous Ammonia | 126,620 | 884,977 | 1,011,597 | - | - | - |
| Nitrogen Solutions | 51,905 | 24,795 | 76,700 | - | - | - |
| **Phosphate:** | | | | | | |
| Monoammonium Phosphate | - | - | - | 117,871 | 84,478 | 202,349 |
| Diammonium Phosphate | - | - | - | 225,600 | 1,303 | 226,903 |
| Triple Superphosphate | - | - | - | 25,061 | 381 | 25,442 |
| Normal Superphosphate | - | - | - | 17,679 | 1,706 | 19,385 |
| Other Phosphate | - | 35,829 | 31,432 | 4,397 | - | - |
| **Potash:** | | | | | | |
| Muriate of Potash | 1,345,483 | 9,658,619 | 11,004,102 | - | - | - |
| Potassium Sulphate | - | - | - | 5,385 | 1,026 | 6,411 |
| Potassium Magnesium Sulphate | - | - | - | 68,446 | 2,519 | 70,965 |
| Prepared Mixtures | 15,605 | - | 11,937 | - | 3,668 | - |
| Other Fertilizer and Fertilizer Materials | 15,981 | - | 7,573 | - | 8,408 | - |
| TOTALS | 1,091,653 | 12,296,440 | 13,388,093 | | | |

Source: Statistics Canada

# 5. FARM EXPENDITURES ON FERTILIZER

Farm expenditures on fertilizer are currently estimated by Statistics Canada employing the National Farm Survey and taxfiler data. Prior to the introduction of the National Farm Survey in 1983, the Agricultural Enumerative Survey and the Farm Enumerative Surveys were the chief sources of information. Before these surveys were introduced in the mid-1970's, consumption estimates were based on information from the Agricultural Census with appropriate adjustments for year-to-year variation in consumption.

The indices of fertilizer prices are from Statistics Canada's Farm Input Price Index. These indices are based on 1986=100 and show the trend in fertilizer price. They are a simple average of the quarterly indices from July to June.

**TABLE 5.1 TOTAL FARM EXPENDITURES ON FERTILIZER AND LIME (1) ATLANTIC PROVINCES**

| Calendar Year | Newfoundland | P.E.I. | Nova Scotia | New Brunswick | Atlantic Provinces |
|---|---|---|---|---|---|
| | | | ($ '000) | | |
| 1991 (2) | 1,087 | 18,136 | 8,580 | 13,720 | 41,523 |
| 1990 | 1,086 | 17,608 | 8,123 | 13,584 | 40,401 |
| 1989 | 1,279 | 18,307 | 8,730 | 13,556 | 41,872 |
| 1988 | 1,275 | 17,334 | 8,600 | 13,331 | 40,540 |
| 1987 | 1,180 | 17,433 | 8,489 | 12,847 | 39,949 |
| 1986 | 1,010 | 16,630 | 7,825 | 12,110 | 37,575 |
| 1985 | 971 | 17,882 | 8,236 | 12,398 | 39,487 |
| 1984 | 992 | 16,759 | 8,093 | 12,072 | 37,916 |
| 1983 | 945 | 16,005 | 7,482 | 12,299 | 36,731 |
| 1982 | 996 | 16,561 | 7,675 | 12,571 | 37,803 |
| 1981 | 1,010 | 16,096 | 7,614 | 11,988 | 36,708 |
| 1980 | 868 | 13,731 | 6,273 | 10,391 | 31,263 |
| 1979 | 501 | 12,606 | 6,802 | 10,080 | 29,989 |
| 1978 | 485 | 11,383 | 5,675 | 8,657 | 26,200 |
| 1977 | 485 | 9,449 | 5,386 | 8,126 | 23,446 |
| 1976 | 425 | 9,522 | 6,381 | 8,143 | 24,471 |
| 1975 | 425 | 9,429 | 6,259 | 8,249 | 24,362 |
| 1974 | 336 | 7,144 | 4,424 | 6,243 | 18,147 |
| 1973 | 247 | 4,679 | 3,564 | 4,138 | 12,628 |
| 1972 | 243 | 3,446 | 2,672 | 3,234 | 9,595 |
| 1971 | N.A. | 3,732 | 2,450 | 3,242 | 9,424 |
| 1970 | N.A. | 3,856 | 2,481 | 3,260 | 9,597 |
| 1969 | N.A. | 3,961 | 2,338 | 4,038 | 10,337 |
| 1968 | N.A. | 3,911 | 1,956 | 3,995 | 9,862 |
| 1967 | N.A. | 3,565 | 2,158 | 4,051 | 9,774 |
| 1966 | N.A. | 4,079 | 2,932 | 4,932 | 11,943 |

(1) Includes all costs associated with the purchase of fertilizer and, where applicable fertilizer application

(2) Forecast

Source: Statistics Canada. "Agriculture Economic Statistics", (Catalogue No. 21-603)

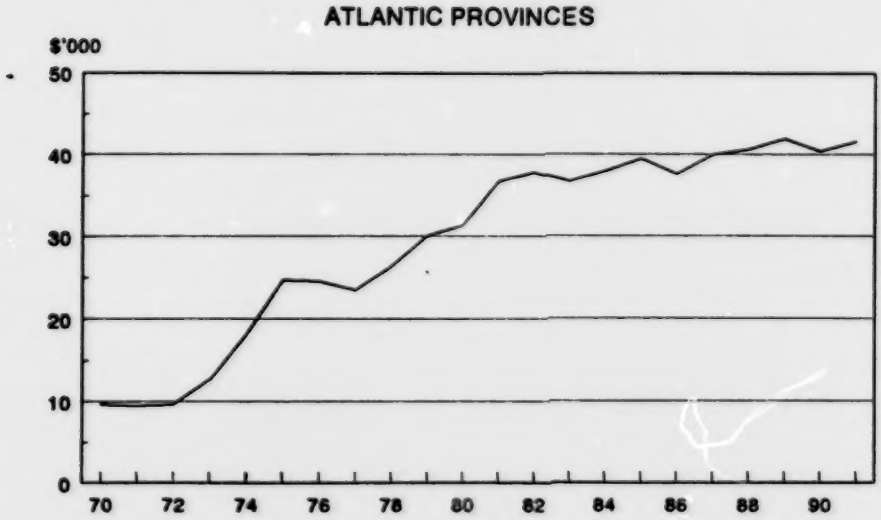


**TABLE 5.2 TOTAL FARM EXPENDITURES ON FERTILIZER AND LIME (1) CENTRAL CANADA**

| Calendar Year | Quebec | Ontario | Central Canada (2) | Eastern Canada |
|---|---|---|---|---|
| | | ($ '000) | | |
| 1991 (3) | 149,855 | 279,898 | 429,751 | 471,274 |
| 1990 | 145,833 | 272,072 | 417,905 | 458,306 |
| 1989 | 161,722 | 299,250 | 460,972 | 502,844 |
| 1988 | 157,270 | 303,807 | 461,077 | 501,617 |
| 1987 | 153,043 | 281,945 | 434,988 | 474,937 |
| 1986 | 147,980 | 267,958 | 415,938 | 453,513 |
| 1985 | 149,554 | 293,312 | 442,866 | 482,353 |
| 1984 | 145,664 | 287,633 | 433,297 | 471,213 |
| 1983 | 140,575 | 248,315 | 388,890 | 425,621 |
| 1982 | 134,141 | 267,016 | 401,157 | 438,980 |
| 1981 | 130,938 | 264,073 | 395,011 | 431,719 |
| 1980 | 117,873 | 256,481 | 374,354 | 405,617 |
| 1979 | 107,735 | 222,715 | 330,439 | 360,439 |
| 1978 | 90,614 | 191,410 | 282,024 | 308,224 |
| 1977 | 66,048 | 152,322 | 218,370 | 241,816 |
| 1976 | 66,212 | 147,664 | 213,876 | 238,347 |
| 1975 | 63,354 | 160,046 | 223,400 | 247,762 |
| 1974 | 45,225 | 107,715 | 152,940 | 171,087 |
| 1973 | 30,574 | 76,485 | 107,059 | 119,687 |
| 1972 | 27,859 | 64,344 | 92,203 | 101,798 |
| 1971 | 25,563 | 62,929 | 88,492 | 97,916 |
| 1970 | 23,900 | 57,762 | 81,662 | 91,259 |
| 1969 | 24,316 | 57,034 | 81,350 | 91,687 |
| 1968 | 23,786 | 74,383 | 98,169 | 108,031 |
| 1967 | 22,809 | 64,908 | 87,717 | 97,491 |
| 1966 | 21,931 | 57,700 | 79,631 | 91,574 |

(1) Includes all costs associated with the purchase of fertilizer and, where applicable fertilizer application

(2) Quebec and Ontario

(3) Forecast

Source: Statistics Canada. "Agriculture Economic Statistics", (Catalogue No. 21-603)

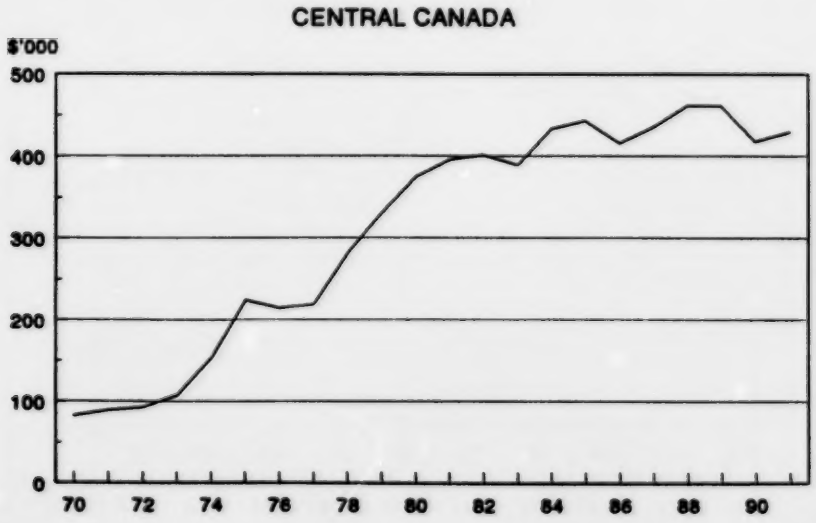


**TABLE 5.3 TOTAL FARM EXPENDITURES ON FERTILIZER AND LIME (1) WESTERN CANADA AND CANADA TOTAL**

| Calendar Year | Manitoba | Sask. | Alberta | British Columbia | Western Canada | Total Canada |
|---|---|---|---|---|---|---|
| | | | ($ '000) | | | |
| 1991 (2) | 157,926 | 200,391 | 238,264 | 37,985 | 634,566 | 1,105,840 |
| 1990 | 171,286 | 226,687 | 249,359 | 36,902 | 684,234 | 1,142,540 |
| 1989 | 179,922 | 253,369 | 269,630 | 37,029 | 739,950 | 1,242,794 |
| 1988 | 194,405 | 261,362 | 252,420 | 34,058 | 742,245 | 1,243,862 |
| 1987 | 187,191 | 294,437 | 248,667 | 35,313 | 765,608 | 1,240,545 |
| 1986 | 168,446 | 320,330 | 286,518 | 35,407 | 840,701 | 1,294,214 |
| 1985 | 219,153 | 310,925 | 319,018 | 36,529 | 885,625 | 1,367,978 |
| 1984 | 211,073 | 299,510 | 336,070 | 30,627 | 877,280 | 1,348,493 |
| 1983 | 186,069 | 266,705 | 315,028 | 27,790 | 797,592 | 1,223,213 |
| 1982 | 167,540 | 212,853 | 288,387 | 27,473 | 696,253 | 1,135,213 |
| 1981 | 162,959 | 196,928 | 280,275 | 25,050 | 667,212 | 1,098,931 |
| 1980 | 145,361 | 166,100 | 202,906 | 21,939 | 536,306 | 941,923 |
| 1979 | 133,540 | 142,914 | 179,205 | 19,300 | 474,959 | 835,396 |
| 1978 | 101,402 | 101,575 | 142,352 | 21,678 | 367,007 | 675,231 |
| 1977 | 73,516 | 61,619 | 114,696 | 14,657 | 241,488 | 506,304 |
| 1976 | 65,274 | 56,590 | 107,156 | 14,402 | 243,422 | 481,769 |
| 1975 | 59,390 | 56,754 | 99,654 | 15,330 | 231,128 | 478,890 |
| 1974 | 36,732 | 35,081 | 63,663 | 9,880 | 145,356 | 316,443 |
| 1973 | 26,708 | 22,143 | 42,584 | 6,186 | 97,621 | 217,308 |
| 1972 | 18,903 | 14,587 | 33,330 | 5,996 | 72,816 | 174,614 |
| 1971 | 15,780 | 11,592 | 29,966 | 6,382 | 63,720 | 161,636 |
| 1970 | 10,906 | 7,281 | 22,714 | 5,281 | 46,182 | 137,441 |
| 1969 | 13,050 | 14,247 | 30,169 | 5,923 | 63,389 | 155,076 |
| 1968 | 24,772 | 29,291 | 43,266 | 5,649 | 102,978 | 211,009 |
| 1967 | 18,521 | 28,395 | 38,099 | 5,691 | 90,706 | 188,197 |
| 1966 | 15,302 | 21,768 | 28,069 | 5,576 | 70,715 | 162,289 |

(1) Includes all costs associated with the purchase of fertilizer and, where applicable, fertilizer application

(2) Forecast

Source: Statistics Canada. "Agriculture Economic Statistics", (Catalogue No. 21-603)

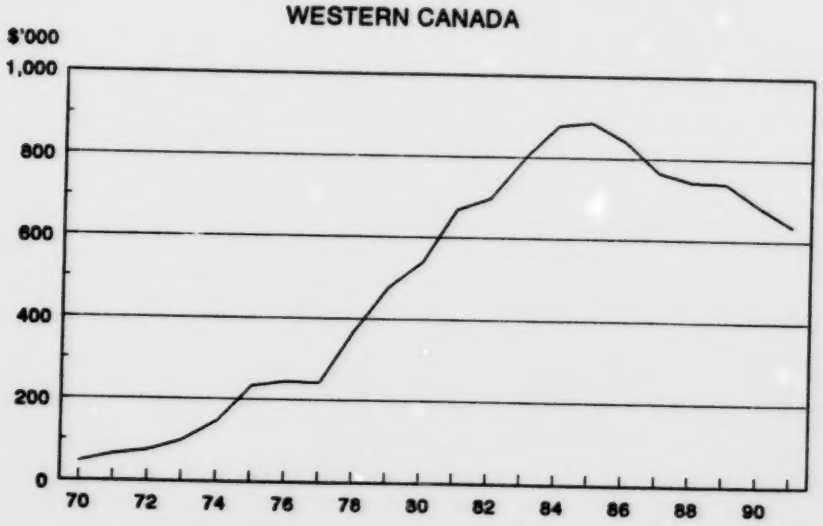
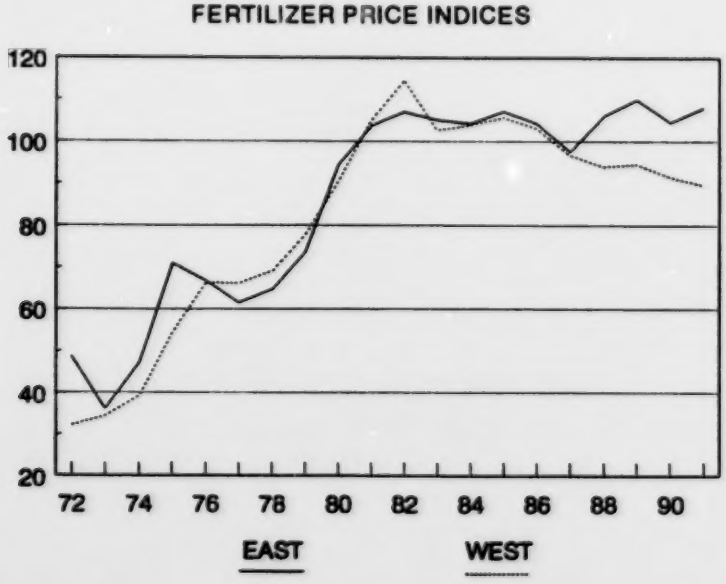


**TABLE 5.4 FERTILIZER PRICE INDICES (1)**

| Year Ending June 30 | EAST | WEST | CANADA |
|---|---|---|---|
| 1991 | 107.9 | 89.4 | 95.9 |
| 1990 | 104.5 | 91.4 | 95.9 |
| 1989 | 109.9 | 94.4 | 99.8 |
| 1988 | 105.9 | 93.8 | 98.1 |
| 1987 | 97.4 | 96.6 | 96.9 |
| 1986 | 104.2 | 103.0 | 103.5 |
| 1985 | 107.1 | 105.5 | 106.2 |
| 1984 | 104.2 | 103.8 | 104.0 |
| 1983 | 105.0 | 102.6 | 103.6 |
| 1982 | 106.9 | 114.6 | 111.5 |
| 1981 | 103.6 | 105.0 | 105.1 |
| 1980 | 94.4 | 90.4 | 93.4 |
| 1979 | 73.6 | 77.6 | 75.9 |
| 1978 | 64.6 | 69.0 | 67.0 |
| 1977 | 61.4 | 66.0 | 63.9 |
| 1976 | 66.7 | 66.2 | 67.1 |
| 1975 | 71.0 | 54.3 | 64.3 |
| 1974 | 47.1 | 39.1 | 44.0 |
| 1973 | 36.2 | 34.2 | 35.6 |
| 1972 | 48.6 | 32.1 | 33.2 |

(1) The indices are the simple average of the quarterly indices for the fertilizer year (July to June) ending in the year shown. Calendar year 1986 = 100

Source: Statistics Canada, "Farm Input Price Index", (Catalogue No. 62-004).



# APPENDIX: ADDRESSES OF DATA SOURCES

Canadian Fertilizer Institute
Suite 1540 Box 2920
360 Albert Street
Ottawa, Ontario
K1R 7X7
(613) 230-9029

Atlantic Fertilizer Institute
3 Birchwood Street
Charlottetown, P.E.I.
C1A 5B4
(902) 894-9361

Quebec Fertilizer
Manufacturers' Association
P.O. Box 218
Jean Talon Station
Montreal, P.Q.
H1S 2Z2
(514) 324-5081

The Fertilizer Institute
of Ontario
Suite 204
1400 Bishop Street
Cambridge, Ontario
N1R 6W8
(519) 622-4011

The Western Canada
Fertilizer Association
#101-9250, 120th Street
Surrey, British Columbia
V3V 4B7
(604) 588-4709

The Potash and Phosphate
Institute
Suite 704
Midtown Plaza
Saskatoon, Saskatchewan
(306) 652-3535